

3.0 Affected Environment, Environmental Impacts and Mitigation

This discussion was focused using the Environmental Evaluation checklist in Appendix A. The Roman numeral after the title refers to the identified issues of the question in the checklist.

3.1 Aesthetics (I)

The project area is an Officially Designated State Scenic Highway and falls within Monterey County's Coastal Zone Boundaries. To bring the highway up to current design standards Caltrans, must remove some trees and shrubs. These removals would only be in the median area and the gore area (the area between the freeway and on/off ramps).

The following is a list of trees and shrubs in the median and gore areas that would be removed:



Looking North at Pacific Grove
Overcrossing

ITEMS TO BE REMOVED	KILO POST (KP) & POST MILE (PM) LOCATION	NORTHBOUND/ SOUTHBOUND OR MEDIAN	NOTES
3 pines and 2 seedlings in ramp gore area	KP 121.72 (PM R75.63)	Northbound	Guardrail would be extended to shield remaining trees closer to the Munras Avenue 'undercrossing' structure
1 mid size oak	KP 124.21 (PM 77.18)	Northbound	Tree is on hinge point to the outside of the curve
Seedlings	KP 123.16- KP 124.53 (PM 76.50 - PM 77.38)	Median	Standard maintenance practices

Additionally, Monterey County has identified trees along Route 1 as a valuable visual element in its Land Use Plan and removal of trees within Coastal Zones requires a County Permit. This level of concern indicates a heightened degree of local sensitivity to the aesthetic attributes of Route 1.

To satisfy the concerns of the City of Monterey, County of Monterey and the citizens of Monterey, Caltrans prepared a Visual Impact Assessment (VIA). This assessment was completed using the process developed by the Federal Highway Association (FHWA). The process for assessing visual impacts satisfies the requirements of the National Environmental Policy Act of 1969 (NEPA). The intent of the following visual impact assessment is to substantiate findings presented within the environmental document by acting as a technical support document.

Landscape of the Site

The project area consists of undulating topography and dense stands of Monterey Pine Forests. The color and texture of the vegetation is integral to identifying the uniqueness of this landscape unit area. The narrow, close and mid-range views of the forested hillsides create a frame for the long-range vistas of the valley and Monterey Bay. Some scattered residential and commercial development is visible between trees along this portion of the highway corridor.

Viewer Sensitivity and Response

The awareness of visual resources by the highway user varies with the viewer activity (e.g. commuter, tourist, local), but generally the highway user experiences a “broadbrush” view of an area. This is especially true for the driver of the vehicle. The local highway user usually makes shorter trips to various destinations in the local area. The local highway user is generally more aware of visual resources from the highway due to their sensitivity to the area’s visual quality. The commuter would be less aware of their visual environment because of repetitive nature of their activity. Tourists generally have a very high awareness of the visual resources around them, yet are less sensitive to specific changes in that environment. Additionally, preliminary studies have indicated that the proposed improvements would be largely unnoticed from outside the immediate roadway corridor, therefore, we have concentrated our studies on the views as seen by the highway travelers.

Analyze Existing Visual Resources

A Visual Quality Evaluation, (VQE) was prepared for the proposed project. The VQE is a tool for quantitatively assessing visual quality from a specific observer viewpoint. The evaluation is prepared for both the existing condition and the proposed condition after construction is completed. With the “before” and “after” evaluation, the Visual Quality Difference can be measured.

The evaluative criterion used in a VQE includes: vividness, intactness, and unity. None of these is itself equivalent to visual quality; the average of all three must be high to indicate high quality.

Vividness is the visual power (or memorableness) of the landscape components as they combine in striking and distinctive visual pattern. Vividness would focus on the features of the landscape.

Intactness is the visual integrity of the landscape (natural and man-made) and its freedom from encroaching elements. If all the various elements of a landscape seem to “fit” together, there would be a high level of intactness.

Unity is the visual harmony of the landscape considered as a whole. Unity represents the degree to which the visual elements maintain a coherent visual pattern.

The Visual Quality Difference (VQD) (impact) is between the existing and proposed conditions (evaluation scale 1-7; 1= very low visual quality, 7= very high visual quality). When reviewing the table at the bottom of each observer viewpoint evaluation, the justification for a high or low visual quality is reflected in the evaluative criteria (i.e.: vividness, intactness, and unity). The VQE acts as the base inventory for determining the change in the visual resource or visual quality difference. A summary of the visual quality difference is analyzed at the end of the Visual Simulation Section (p. 7).

Visual Simulations

The following two key observer viewpoints were identified in this assessment (*see pp. 5-7, Observer Viewpoints #1 & #2*). The viewpoints are representative of a range of visual resources within the project.

It is important to understand where and why the changes in visual resources occur. For each observer viewpoint, the first image is the existing view and the accompanying view depicts the visual changes that may result from the proposed improvement. In order to best understand the extent of impact, the proposed images show each area as it may look in three years following construction.

Observer Viewpoint #1



Existing—This viewpoint represents how the project area appears to northbound highway travelers between Iris Canyon Road and Aguajito Road Undercrossings. The road alignment through the narrow vegetated corridor is in visual harmony with the landform. The curve in the roadway along with the densely vegetated sloped shoulders obtains an above average rating for all three visual quality criteria; vividness, intactness, and unity.

Observer Viewpoint #1

Proposed—The proposed improvement represents how a double white beam installed in the center of the median would appear to highway travelers. The introduction of another vertical man-made form would somewhat disrupt the valley corridor character. The roadway vividness and unity would slightly be reduced. While intactness would experience a moderate reduction rating due to the break in valley vegetation continuity.

<u>Viewpoint #1</u>	<u>Vividness / Intactness / Unity = Visual Quality (VQ=V+I+U/3)</u>				
Existing	5.9	5.7	5.8	=	5.8
Proposed	5.5	5.1	5.4	=	5.3
Visual Quality Difference				=	-0.5

Observer Viewpoint #2

Existing—This viewpoint represents how the project area appears to northbound highway travelers approaching the Aguajito Road Exit. The narrow corridor decreases in elevation and reveals the valley. Long-range views to Monterey Bay are complemented with dense foreground planting resulting in a high rating of vividness. Intactness and unity are somewhat compromised due to the influence of development viewed in the valley floor and the corridor.



Proposed—The proposed improvement illustrates single three beam at the edge of inside shoulders protecting the existing plantings. The barrier would disrupt the visual rhythm of the opening and closing of views causing all three visual criteria ratings to decrease.

Viewpoint #2	Vividness / Intactness / Unity			= Visual Quality (VQ=V+I+U/3)	
Existing	5.8	5.5	5.7	=	5.7
Proposed	5.3	5.1	5.2	=	5.2
Visual Quality Difference				=	-0.5

Visual Quality Changes

The following is a summary of the potential visual changes:

	<u>Viewpoint 1</u>	<u>Viewpoint 2</u>	<u>Average</u>
Visual Quality Ratings-Existing	5.8	5.7	5.75
Visual Quality Ratings-Proposed	5.3	5.2	5.25

Summary of Visual Changes

The overall existing visual quality varies between 5.7 to 5.8 for the existing conditions. The average quality rating for the existing conditions is 5.75. This quality rating would be considered in the “high” range, and after the proposed project is in place the overall visual quality would drop slightly but still retain a moderately high visual quality average of 5.25.

Attributes of Visual Quality

Through analysis of the specific viewpoints and study of the visual experience of the corridor for the proposed project, it is found that the existing high visual quality can be attributed to the following:

- The combination of distant views to the ocean.
- Narrow corridors created by valley landforms.
- Native vegetation. The space-defining quality of the Monterey Pine Forest in the narrow areas to the open mosaic of vegetation in the coastline dune communities.
- The contrast in landforms and materials.
- In areas, the minimal visual encroachment and disturbance of constructed elements.

Recommended Mitigation

In order to maintain these visual quality elements and to decrease the amount of negative visual impact causes by the project, the following design mitigation is recommended:

- Retain as many existing trees and shrubs in the median as possible by installing thrie beam safety barriers at the inside shoulders of the roadway.
- Where possible, extend existing thrie beam barrier extensions to encapsulate existing trees and shrubs.

- If necessary, prepare special project specifications to help limit disturbance around existing plant material. Example: During installation of the thrie beam require the contractor to install the posts from a drill rig on the shoulder of the roadway versus clear-cutting the entire median.
- Signs moved or replaced during construction will match existing aesthetics (wood frame around sign).
- Extend bridge guardrail along the outside shoulder of roadway to protect existing vegetation. Specifically at the following locations:

Northbound	Soledad Drive Bridge Structure to KP 122.48 (PM 76.11)
	Munras Avenue Undercrossing Structure to KP 121.86 (PM 75.72)
Southbound	Soledad Drive Bridge Structure to KP 122.44 (PM 76.08)
	Soledad Drive Bridge Structure to KP 122.15 (PM 75.90)
	Munras Avenue Undercrossing Structure to KP 121.84 (PM 75.71)

- Replant appropriate plant material lost due to construction in the median or along the outside shoulder outside the safe recovery zone at a replacement ratio of 3 to 1.
- Plant material removed from the median should be mitigated in the median.
- Plant material removed from the outside shoulders should be mitigated along the outside shoulders.
- Avoid threatened or rare plant species by designing safe alternative layouts of thrie beam.
- Where possible reduce the width of area between face of thrie beam and edge of travel way.
- Revegetate disturbed areas with indigenous plants.

The following sets of photographs (*pgs. 10 & 11*) identify two existing observation areas and illustrate how mitigation planting may appear, several years after construction.

Observation Point #2



Northbound Approaching Aguajito Road Exit—Existing

Observation Point #2



Northbound Approaching Aguajito Road Exit—several years after construction

Observation Point #3



Northbound 68/01 South Separation—Existing

Observation Point #3



Northbound 68/01 South Separation— several years after construction

Conclusion

A reduction in visual resources would occur within the project limits of preferred Alternative 3. Installing another man-made object to the median lowers the visual quality of the space. The straight line of the wood and galvanized metal barrier would detract from the natural picturesque regional landscape. The barrier would disrupt the visual rhythm of the opening and closing of views and unique regional elements. In general, however, the relative size of the proposed improvement *would not detract from the high quality of the total visual environment.*

An important consideration is the potential cumulative effect of 3.9 kilometers (2.4 miles) of change even though visual impacts at specific locations are minor. Without mitigation, the proposed alternative would lower the visual quality for most users and viewers in the immediate project area. The greatest negative visual impacts noticed would be the installation of the double thrie beam and the loss of trees and shrubs in the median. With the implementation of the stated mitigation methods, many of the adverse visual effects of this project would be reduced.

Overall, the project would not have a substantial adverse effect on the scenic vista; would not substantially damage scenic resources and would not substantially degrade the existing visual character or quality of the site and its surroundings.

3.2 Biological Resources (IV)

The project would not significantly affect biological resources. However, in the construction process there is a need to remove a Coast Live Oak, Monterey pines and various shrubs. Caltrans mitigation for the removal of healthy trees and shrubs is at a replacement ratio of 3 to 1. Replanting would be done within similar areas (i.e., plants removed from the median would be replanted in a median envelope and plants removed from an outside shoulder area would be replanted along the outside shoulders).

Additionally, the California Department of Forestry and Fire Protection recommends not planting Monterey Pines—the proliferation of pine pitch canker makes success improbable. Should the California Endangered Species Act protect native Monterey pine stands before project construction, Caltrans would have to obtain a Section 2081 Permit from the California Department of Fish and Game before removing any native Monterey pines. Results of this permit process would be considered in the Coastal Development Permit process.

The research for the Natural Environment Study began with a California Natural Diversity Database (CNDDB) search. A field review with the project development team followed the database search. No habitat or individuals of special-status species were observed within the Area of Potential Effect (APE). The project would affect mostly the median and other cut and fill areas. Little or no original ground exists in the APE. Most habitat is landscaping and ruderal grassland/weeds, precluding occurrences of the sensitive species that the CNDDB search indicated in the project area.

3.3 Water Quality (VIII)

Since the proposed project would disturb more than 2.0 hectares (5 acres) of previously unpaved surface, a Notice of Intent (NOI) to the State Water Resources Control Board (SWRCB) and a Storm Water Pollution Prevention Plan (SWPPP) for the Contractor would be required for this work.

A statewide permit for storm water discharge is expected to be approved by State Water Resources Control Board in or around October 1999. This permit may impose different requirements for projects involving greater than 1 or greater than 2.0 hectares (5 acres) (e.g., specific requirements for projects greater than 1 acre and different requirements for projects greater than 5 acres). The Contractor would be responsible for contacting Frank Catherina (805-549-3386), Caltrans District 5 Storm Water Coordinator, for the latest information on this program.

4.0 Consultation and Coordination

Caltrans staff coordinated and consulted with the following agencies and organizations during the project development.

AGENCY	TYPE OF MEETING AND COMMENTS
City Council, City of Monterey	Public information meeting was held on August 18, 1998 at City Council Chambers, City of Monterey. Caltrans project design, project management, traffic safety and environmental staff were available to answer questions. City's concerns: keep visual character; type and texture of barrier; do not want barrier to look like Los Angeles (i.e., too urbanized); and ensure irrigation of new plant material.
City of Monterey, Architectural Review Committee	City of Monterey Architectural Review Committee (ARC) meeting, September 2, 1998. Committee made recommendations to City Council concerning: color and texture; median barrier material; requirement of three beam design; amount of paving; consider extending existing landscaped areas; new plantings should be drought tolerant; replacement of trees consistent with City policies; and metal barrier should not be shiny.
City Council, City of Monterey	Public information meeting was held on September 15, 1998 at City Council Chambers, City of Monterey. Bob McNew, Traffic Safety Branch, Caltrans spoke on project. Median Barrier item continued pending further discussions with Caltrans staff. Issues: require additional design options; use funds allocated for this project to improve other highways; and requested Caltrans to submit better visuals of proposed alternatives using computer graphics.